

REMARKS

This Amendment is in response to the Office Action mailed May 25, 2006. Claims 1, 3-10, 12, 15, 16, 20-25, 28 and 30 are pending in the application. Claims 4-6, 9 and 10 are withdrawn and claims 1, 3, 7, 8, 12, 15, 16, 20-25, 28 and 30 are rejected. By this Amendment, editorial amendments have been made to claims 1, 4, 6-8, 10, 12, 21-22 and 28, and Applicants respond to the Office Action as follows.

Response to Objection to the Specification

The disclosure was objected to on the basis that "off-nodal" is written as "off nodal". Applicants have amended to specification so that "off nodal" is written as "off-nodal". Accordingly withdrawal of the objection to the specification is respectfully requested.

Response to Claim Objections

Claim 20 was objected to on the basis that "off nodal" should be written as "off-nodal". Claim 20 has been amended so that "off nodal" is written as "off-nodal". Withdrawal of the objection to claim 20 is respectfully requested.

Response to Claim Rejections – 35 U.S.C. § 102

Claims 1, 30, and 12 are rejected under 35 U.S.C. § 102(e) as being anticipated by Rao, U.S. Patent No. 6,999,282.

Claim 1 and dependent claim 30 recite a raised bearing surface or surfaces including a center portion along a leading edge portion of the slider body having a gap in a cross width direction within the center portion of the slider body and a bearing surface or surfaces within the intermediate portion having an expanded cross width relative to the cross width of the center portion, and a stepped bearing surface or surfaces recessed from the center portion and the stepped bearing surface or surfaces having a cross width profile that includes a narrowing cross width dimension that narrows in a direction towards the trailing edge of the slider body from the intermediate portion. Each of the recited claim elements is not taught nor suggested by Rao. Withdrawal of the rejection of claims 1 and 30 based upon Rao is respectfully requested.

Claim 12 recites a trench proximate to a center portion of a raised bearing surface or surfaces along the leading edge portion of the slider body, which as claimed is not taught nor

suggested by Rao. Reconsideration and withdrawal of the rejection of claim 12 based upon Rao is respectfully requested.

Claim 21 is rejected under 35 U.S.C. § 102(b) as being anticipated by Cha et al. U.S. Patent No. 6,943,989. Pursuant to 35 U.S.C. § 102(b), a person is entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country . . . **more than one year prior** to the date of the application for patent in the United States.” (emphasis added) The present application was filed June 27, 2003. Cha et al. U.S. Patent No. 6,943,989 issued September 13, 2005 more than two year **after** the June 27, 2003 filing date of the present application.

The Cha patent is related to U.S. Patent Publication No. 2003/0227717, which published December 11, 2003. The December 11, 2003 publication date of U.S. Patent Publication No. 2003/0227717 is **after** the June 27, 2003 filing date of the present application. Cha, U.S. Patent No. 6,943,989 was not patented more than a year prior to the filing date of the present application, nor published more than a year prior to the filing date of the present application and thus is not prior art under 35 U.S.C. § 102(b). Based upon the foregoing withdrawal of the rejection of claim 21 under 35 U.S.C. § 102(b) based upon Cha is respectfully requested.

Furthermore, claim 21 is not anticipated by Cha under 35 U.S.C. § 102(e) on the basis that claim 21 recites a raised bearing surface or surfaces including a center portion along a leading edge portion of the slider body having a narrow leading edge cross width and including side portions extending outwardly from the center portion within an intermediate portion of the slider body, which as claimed is not taught nor suggested by Cha.

Claims 12, 15, and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Park, U.S. Patent No. 6,411,468. Claim 12 and dependent claims 15 and 16 recite a raised bearing surface or surfaces elevated above a recessed surface or surfaces and the raised bearing surface or surfaces including a center portion having a narrow cross width spaced from opposed sides of the slider body along a leading edge portion of the slider body and a trench proximate to the center portion of the raised bearing surface or surfaces along the leading edge portion of the

slider body and a leading edge step and opposed side steps from the trench to the center portion along the leading edge portion of the slider body, which as claimed is not taught by Park.

Response to Claim Rejections – 35 U.S.C. § 103

Claim 21 and dependent claims 28, 3, 24, 7, 8, 22, 23 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Park in view of Cha et al. on the basis that Park et al shows an air bearing slider in FIG. 6, including: a slider body having a leading edge, a trailing edge and opposed sides; and raised bearing surfaces 142+150+151 having a perimeter surface profile including a narrow leading edge cross width, an expanded intermediate cross width and a trailing edge profile having a narrow cross width relative to the expanded intermediate cross width and a raised center pad 21a proximate to the trailing edge spaced from opposed sides of the slider body and it would be obvious to add a stepped pad as taught by Cha for providing improved lift off and preventing damage.

As clearly established by the Federal Circuit in *In re Lee*, the Patent Office must provide some objective teaching in the prior art that one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002) (quoting *In re Fritch*, 23 U.S.P.Q.2d 1780, 1783). The factual question of motivation is material to patentability and can not be resolved on subjective belief and unknown authority. *In re Lee* at 1434.

In the Office Action, the Examiner states that Cha shows stepped bearing surface 22a proximate to raised center pad 21a and that Col. 6, lines 17-19 teach that the stepped pad would improve lift-off for the slider and prevent damage to the rails. Col. 6, lines 17-19 of Cha provide:

[A]ntistiction pads 25, 27 may be provided having a greater height than rails 12, 14. These pads would provide improved lift-off for the slider 10 and prevent damage to the rails 12, 14 when the slider 10 is close to the moving disc.

Thus, col. 6, lines 17-19 relate to a motivation for providing anti-stiction pads 25, 27 proximate to the leading edge for lift off and to prevent damage to rails 12, 14 and does not speak to pad 21a proximate to the trailing edge. Park teaches stepped bearing surfaces 120, 135 and 126 for lift-off. Assuming, that Cha provides a motivation to provide anti-stiction pads proximate to the leading edge for lift off, the combination of Park and the anti-stiction pads of Cha does not teach or suggest each of the recited claim limitations of claim 21 and dependent claims 28, 3, 24, 7, 8, 22, 23 and 25. Thus, based upon the foregoing, the combination of Park and Cha as set forth in the Office Action does not negate patentability of claim 21 and dependent claims 28, 3, 24, 7, 8, 22, 23 and 25.

Different air bearing designs provide different pressure profiles and even small differences in an air bearing structure can affect air bearing dynamics and performance. Park discloses a plurality of air bearing surfaces including multiple high pressure regions (e.g. 111, 112, 113, 114 in FIG. 4) and separate negative pressure zones (e.g. 160, 170 in FIG. 4). Cha teaches a single negative pressure zone having areas of different depths (e.g. 19 and 20 in FIG. 3). Without a specific motivation, there is no basis to modify Park in view of Cha since Cha is functionally different from Park and Cha does not teach air bearing features for an air bearing structure having separate negative pressure zones as disclosed by Park.

Response to Claim Rejections – 35 U.S.C. § 102 (b)

Claim 20 is rejected under 35 U.S.C. § 102(b) as being anticipated by Wang et al. U.S. Patent No. 6,275,467 on the basis that “Wang et al shows an air bearing slider in Fig. 2 including a slider body including a leading edge, a trailing edge and opposed sides, and bearing surface means on the slider body for providing a nodal bearing pressure profile (Fig. 3), which would limit pressurization in both nodal region and off-nodal region.” Means-plus-function language in a claim must be construed according to the corresponding structure disclosed in the Applicant’s specification and equivalents. See In re Donaldson Co., 29 U.S.P.Q.2d 1845 (Fed. Cir. 1994).

To establish equivalency, the Office must establish that the prior art element (1) performs the identical function in substantially the same way to produce substantially the same

result as the corresponding element disclosed in the specification, (2) that a person of ordinary skill in the art would have recognized the interchangeability of the elements shown in the prior art for the corresponding element disclosed in the specification, (3) that there are insubstantial differences between the prior art element and the corresponding element disclosed in the specification or (4) that the prior art element is a structural equivalent of the corresponding element disclosed in the specification. *See*, Supplemental Examination Guidelines for 35 U.S.C. § 112, published in the Federal Register June 21, 2000. The Office Action interprets the means-plus-function language without reference to or consideration of the corresponding structure in Applicants' specification and thus fails to set forth a *prima facie* basis to reject claim 20. Wang discloses pressure peaks in off-nodal regions and thus does not teach the recited means as discussed above. Accordingly, allowance of claim 20 is respectfully requested.


Based upon the foregoing, allowance of rejected claims 1, 3, 7-8, 12, 15-16, 20-25, 28 and 30 is respectfully requested.

Upon allowance of a generic base claim, Applicants respectfully request allowance of the withdrawal claims dependent upon the allowed base claim.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 
Deirdre Megley Kvale, Reg. No. 35,612
900 Second Avenue South, Suite 1400
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

DMK:rev